

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (previously presented): A method for performing presbyopic correction in which a portion of the sclera tissue is removed by steps of:

- (a) selecting a laser having a predetermined wavelength;
- (b) selecting a beam spot controller mechanism to reduce and focus a beam produced by said laser to a fiber delivery unit;
- (c) controlling said fiber delivery unit to deliver said laser beam in a predetermined pattern onto a plurality of positions on the sclera surface to remove a portion of the sclera tissue outside the limbus area by ablating the sclera to a depth of 400-700 microns, whereby a presbyopic patient's vision is corrected to see near by increasing the accommodation of the eye.

Claim 2 (previously presented): A method of Claim 1, wherein said laser is an ultraviolet laser having a wavelength range of about (0.15 - 0.36) microns and a pulse duration less than about 200 nanoseconds.

Claim 3 (previously presented): A method of Claim 1, wherein said laser is an infrared laser having a wavelength range of about (1.4 - 3.2) microns.

Claim 4 (previously presented): A method of Claim 3, wherein said infrared laser is an optically pumped Erbium:YAG laser having a wavelength of about 2.9 microns.

Claim 5 (previously presented): A method of Claim 1, wherein said laser is an ArF excimer laser having a wavelength of 193 nm.

Claim 6 (previously presented): A method of Claim 1, wherein said laser is a XeCl excimer laser having a wavelength of 308 nm.

Claim 7 (previously presented): A method of Claim 1, wherein said laser is a solid state diode laser having a wavelength range of about (0.95 - 2.1) microns with a power higher than 2 watts and focused to a spot size less than 0.5 mm on the sclera surface.

Claim 8 (previously presented): A method of Claim 1, in which said beam spot controller consists of at least one focusing spherical lens to couple the said laser beam to the said fiber delivery unit.

Claim 9 (previously presented): A method of Claim 1, wherein said fiber delivery unit consists of an optical fiber having a length of about (0.5 - 1.5) meters and core diameter of about (0.2 - 0.8) mm and a hand piece connected to a fiber tip.

Claim 10 (previously presented): A method of Claim 9, wherein said fiber delivery unit is substantially transparent to the wavelength of said laser beam.

Claim 11 (currently amended): A method of Claim 9, wherein said fiber tip is made of a similar material as that of the fiber and is made to focus the said laser beam onto a treated sclera area of the eye, the fiber tip having a shape chosen from the group consisting of ~~list consisting of~~ conical, spherical, 90-degree reflecting angle and flat end.

Claim 12 (currently amended): A method of Claim 9, wherein said fiber tip focuses the said laser beam onto a treated area ~~the treated area~~ of the eye at a spot size of about (0.1 - 0.5) mm in diameter.

Claim 13 (currently amended): A method of Claim 9, wherein said fiber tip is made in a cylinder shape to focus said laser beam onto a treated area ~~the treated area~~ of the eye at a line shape having a dimension of about (0.1 - 0.4) in width and (0.5 - 4.0) mm in length.

Claim 14 (previously presented): A method of Claim 9, wherein said fiber tip is operated in a contact-mode.

Claim 15 (previously presented): A method of Claim 9, wherein said fiber tip is operated in a non-contact mode.

Claim 16 (previously presented): A method of Claim 1, wherein said fiber delivery unit is controlled by the surgeon to deliver the laser beam in said predetermined pattern outside the limbus by manually moving the fiber tip in the radial direction of the eye.

Claim 17 (previously presented): A method of Claim 1, wherein said fiber delivery unit is attached to a scanning device to perform said predetermined pattern outside the limbus and scan said laser beam along the radial direction of the eye.

Claim 18 (previously presented): A method of Claim 1, wherein said predetermined pattern outside the limbus is defined by the area between two circles having radius of about 5.0 mm and 9.0 mm, respectively.

Claim 19 (previously presented): A method of Claim 1, wherein said predetermined pattern includes at least 3 radial lines around the area outside the limbus.

Claim 20 (previously presented): A method of Claim 1, wherein said predetermined pattern includes at least one ring formed by 3 circular spots having a diameter of about (0.2 - 0.5) mm around the area outside the limbus.

Claim 21–22 (cancelled).

Claim 23 (previously presented): A method of Claim 1, wherein said sclera tissue is removed by said laser after the conjunctiva layer is open.

Claim 24 (previously presented): A method of Claim 1, wherein said sclera tissue is removed by said laser without opening the conjunctiva layer.